Work Order ID 74013

Tuesday, September 20, 2011 11:30:35 AM

Ship Eagle Sept 28th

Item ID: D412-702-021 **Accept** **Setup Start**

Revision ID: U/R **Stop**

Item Name: 13-Man Shoulder Harness, 4 point

Start Date: 9/20/2011 **Start Qty:** 1.00 **Cust Item ID:**

Required Date: 9/26/2011 **Req'd Qty:** 1.00 **Customer:**

Reference:

Approvals: **Process Plan:** MF **Date:** 11-09-20 **Tooling:** **Date:** **Run Start**

QC: **Date:** **SPC (Y/N):** **Date:** **Stop**

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	**Revision Nbr**								
N/A	Rev N/A								
100	DOCUMENT CONTROL	0.00							
DC	**Memo**	0.00							
Document Control	Photocopy bluefile and create labels per PPP D412-702-021 CHG003								
110	Pick Kit	0.00							
Packaging	**Memo**	0.00							
Packaging									
120	QC4- 100% Inspect kits for completeness	0.00							
QC	**Memo**	0.00							
Quality Control									

Char BG 11-9-21

SP 11-09-20

TC

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

H:\fFORMS\Quality Assurance\approved QA\NCRWO RevE

Work Order ID 74013

Tuesday, September 20, 2011 11:30:35 AM

Item ID: D412-702-021
Revision ID: U/R
Item Name: 13-Man Shoulder Harness, 4 point

Accept

Setup Start
Stop

Start Date: 9/20/2011 **Start Qty:** 1.00
Required Date: 9/26/2011 **Req'd Qty:** 1.00
Reference:

Cust Item ID:
Customer:

Run Start
Stop

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130		0.00							
Packaging	Packaging					11/9/27			
Packaging	**Memo**	0.00							
Packaging	Identify and pack for shipping as per PPP D412-702-021 Location:_____ RCOC								
140	QC21- Final Inspection - Work Order Release	0.00							
QC							11/9/27		
Quality Control	**Memo**	0.00							

11-09-27

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

H:\fFORMS\Quality Assurance\approved QA\NCRWO RevE

Picklist Print

Tuesday, September 20, 2011 11:30:31 AM

Work Order ID: 74013

Parent Item: D412-702-021

Parent Item Name: 13-Man Shoulder Harness, 4 point

Start Date: 9/20/2011 **Required Date:** 9/26/2011

Start Qty: 1.00 **Required Qty:** 1.00

Comments:
IPP Rev:B Removed Manufacturing 05-11-08 JLM
IPP Rev:C□06.04.03□As per DSI9324 JLM
IPP rev D 06.12.14 per ecn 871 EC
IPP Rev:E 07-03-14 As per DSI 9351 JLM
IPP Rev:F 07-07-28 As per Rev E JLM Verified By:ec IPP Rev.G
11.05.31 DSI 9559 EC verified by:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
AN4-13A Bolt		Purchased	No			120	Each	1,766.000	4	4		SP 11-09-20	
				Location			**Loc Qty**		**Loc Code**				
				ST357			1766						
					118078		594						
					118351		172			4x			
					118706		500						
					118838		500						
AN4-20A Bolt		Purchased	No			120	Each	478.0000	8	8		SP 11-09-20	
				Location			**Loc Qty**		**Loc Code**				
				ST359			478						
					116419		178			8x			
					117514		300						
AN4-5A Bolt		Purchased	No			120	Each	186.0000	4	4		SP 11-09-20	
				Location			**Loc Qty**		**Loc Code**				
				ST355			180						
					117508		180			4x			
				ST356			6						
					116549		6						

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

H:\FORMS\Quality Assurance\approved QA\NCRWO RevE

Picklist Print

Tuesday, September 20, 2011 11:30:31 AM

Work Order ID: 74013

Parent Item: D412-702-021

Parent Item Name: 13-Man Shoulder Harness, 4 point

Start Date: 9/20/2011 **Required Date:** 9/26/2011

Start Qty: 1.00 **Required Qty:** 1.00

AN960JD416 NAS1149D0463J Washer	Purchased	No	M118384 20x	120	Each	0.0000	20	20	SP Sp11-09-20
D3195-041 Bracket Assembly	Manufactured	No		120	Each	4.0000	2	2	SP Sp11-09-20

Location	Loc Qty	Loc Code
ST246A	4	
71905	4	2x

D3195-043 Bracket Assembly	Manufactured	No		120	Each	5.0000	2	2	SP Sp11-09-20

Location	Loc Qty	Loc Code
ST246A	5	
72925	5	2x

D3196-1 Bar	Manufactured	No		120	Each	3.0000	1	1	SP Sp11-09-20

Location	Loc Qty	Loc Code
ST260	3	
72921	3	1x

D3196-3 Bar	Manufactured	No		120	Each	6.0000	1	1	SP Sp11-09-20

Location	Loc Qty	Loc Code
ST260	6	
72922	6	1x

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

H:\fFORMS\Quality Assurance\approved QA\NCRWO RevE

Picklist Print

Tuesday, September 20, 2011 11:30:31 AM

Work Order ID: 74013

Parent Item: D412-702-021

Parent Item Name: 13-Man Shoulder Harness, 4 point

Start Date: 9/20/2011 **Required Date:** 9/26/2011

Start Qty: 1.00 **Required Qty:** 1.00

D3196-4	Manufactured	No	120	Each	7.0000	1		SP 11-09-20
Bar								

Location	Loc Qty	Loc Code
ST260	7	
71904	7	

D3197-041	Manufactured	No	120	Each	0.0000	2	2	B73102
Bar Assembly								
D3198-1	Manufactured	No	120	Each	22.0000	4	4	SP 11-09-20
Fitting								

Location	Loc Qty	Loc Code
ST246A	22	
73275	22	

D3268-1	Manufactured	No	120	Each	4.0000	2	2	SP 11-09-20
Placard								

Location	Loc Qty	Loc Code
ST246A	4	
70951	4	

D3546-1	Manufactured	No	120	Each	2.0000	2	2	SP 11-09-20
Clip								

Location	Loc Qty	Loc Code
ST245	2	
70150	2	

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

H:\fFORMS\Quality Assurance\approved QA\NCRWO RevE

Picklist Print

Tuesday, September 20, 2011 11:30:32 AM

Work Order ID: 74013

Parent Item: D412-702-021

Parent Item Name: 13-Man Shoulder Harness, 4 point

Start Date: 9/20/2011 **Required Date:** 9/26/2011

Start Qty: 1.00 **Required Qty:** 1.00

D3551-11 Hook and Loop Tie	Manufactured	No		120	Each	13.0000	13	13	Sep 11-09-20.

Location		Loc Qty	Loc Code	
ST246A		13		
	73276	13		13x

D412-702-069 GG Grommet	Manufactured	No		120	Each	1.0000	1	1	Sep 11-09-20

Location		Loc Qty	Loc Code	
FG122		1		
	70940	1		1x

D4387-041 Harness Assembly	Manufactured	No		120	Each	18.0000	9	9	Sep 11-09-20

Location		Loc Qty	Loc Code	
ST263		18		
	73274	18		9x

D4387-043 Harness Assembly	Manufactured	No		120	Each	8.0000	4	4	Sep 11-09-20

Location		Loc Qty	Loc Code	
ST263		8		
	70056	8		4x

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

H:\FORMS\Quality Assurance\approved QA\NCRWO RevE

Picklist Print

Tuesday, September 20, 2011 11:30:32 AM

Work Order ID: 74013

Parent Item: D412-702-021

Parent Item Name: 13-Man Shoulder Harness, 4 point

Start Date: 9/20/2011 **Required Date:** 9/26/2011

Start Qty: 1.00 **Required Qty:** 1.00

MS21042L4 Nut	Purchased	No		120	Each	4,309.000	12	12 SP 11-09-20

Location		Loc Qty	Loc Code	
ST300		4309		
	117441	51		
	117601	637		
	~~117885~~	621		12x
	118451	2000		
	118927	1000		

MS24694-S152 Screw	Purchased	No		120	Each	13.0000	8	8 SP 11-09-20

Location		Loc Qty	Loc Code	
ST289A		13		
	116440	13		8x

MS24694-S154 SCREW	Purchased	No		120	Each	2.0000	8	8 SP 11-09-20 M119022 11/9/26

-6

Location		Loc Qty	Loc Code	
ST290		2		
	117601	2		2x

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

H:\FORMS\Quality Assurance\approved QA\NCRWO RevE

QTY -021	QTY -023	QTY -025	QTY -027	QTY -029	QTY -035	Part Number	Description
X						**D412-702-021**	**Dart 13-Man Shoulder Harness Kit, 4-point**
	X					**D412-702-023**	**Dart 5-Man Forward Facing Shoulder Harness Kit, 4-point**
		X				**D412-702-025**	**Dart 4-Man Aft Facing Shoulder Harness Kit, 4-point**
			X			**D412-702-027**	**Dart 4-Man Side Facing Shoulder Harness Kit, 4-point**
				X		**D412-702-029**	**Dart 1-Man Forward Facing Shoulder Harness Kit, 4-point**
					X	**D214-702-035**	**Dart 5-Man Aft Facing Shoulder Harness Kit, 4-point, for Bell 214B/B-1**
1	1		1	1		D412-702-069	GROMMET KIT
2	2					D3195-041	BRACKET
2	2					D3195-043	BRACKET
1	1			1		D3196-1	BAR
1			1			D3196-3	BAR
1			1			D3196-4	BAR
2	2					D3197-041	BAR
4		4				D3198-1	FITTING
2	2					D3268-1	PLACARD
9	5		4	1		D3446-041	HARNESS ASSEMBLY, 4 POINT
4		4				D3446-043	HARNESS ASSEMBLY, 4 POINT
					5	D3446-045	HARNESS ASSEMBLY, 4 POINT
13	5	4	4	1	5	D3551-11	HOOK AND LOOP TIE
2	2					D3546-1	CLIP
4		4				AN4-5A	BOLT
4	4					AN4-13A	BOLT
8		8				AN4-20A	BOLT
20		20				AN960JD416	WASHER (OR NAS1149D0463J)
12		12				MS21042L4	NUT (OR MS21042-4)
8	2		6	2		MS24694-S152	SCREW
8	2		6	2		MS24694-S154	SCREW

QTY -069	Part Number	Description
X	**D412-702-069**	**GROMMET KIT**
24	D3619-2	GROMMET
1	D3619-2T1	HOLE PUNCH
1	D3619-2T2	STRIKER BLOCK
1	D3619-2T3	PUNCH
1	D3619-2T4	DIE

• COPYRIGHT © 2010 BY DART AEROSPACE LTD •
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

REFERENCE ONLY

DART SERVICE INSTRUCTION

TO AMEND IIN-D412-702-1 REV. A,
AND ICA-D412-702 REV. 4 OR EARLIER APPROVED REVISIONS
REF. TCCA STC: SH04-7
REF. FAA STC: SR01997NY
REF. EASA STC: EASA.IM.R.S.00710

PURPOSE

The purpose of this DSI is to outline the replacement of existing D3446-041/-043 Shoulder Harnesses with the new and improved D4387-041/-043 Shoulder Harnesses.

CHANGE

For the following Kits, the D4387-041 and D4387-043 Shoulder Harnesses respectively replace the D3446-041 and D3446-043 Shoulder Harnesses as follows:

Old Harness P/N	Used On	New Harness P/N	Effectivity
D3446-041	D412-702-021	D4387-041	CHG 003 and subsequent
	D412-702-023		
	D412-702-027		CHG 002 and subsequent
	D412-702-029		
D3446-043	D412-702-021	D4387-043	CHG 003 and subsequent
	D412-702-025		CHG 002 and subsequent

Customers who want to upgrade their shoulder harnesses may replace their existing D3446-041/-043 with D4387-041/-043 per this service instruction.

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED
BY: _____
D. SHEPHERD (DE # 02)

DATE: 11.05.09
CERT. NO.: SH04-7
ISSUE NO.: 3

REV.	DESCRIPTION	BY	DATE
A	NEW ISSUE	MB	11.05.09

DESIGN		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
DRAWN		
CHECKED		DRAWING NO. DSI 9559 — REV. A — SHEET 1 OF 1
MFG. APPR.	N/A	
APPROVED		TITLE: HARNESS CHANGE — SCALE: NTS
DE APPR.		
DATE	11.05.09	

COPYRIGHT © 2011 BY DART AEROSPACE LTD
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.